



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:) Art Unit: 2817
James R. SMITH) Confirmation No.: 1761
Appln. No.: 09/888,572) Washington, D.C.
Filed: June 26, 2001) April 16, 2002
For: MODULAR SOFTWARE DEFINABLE) ATTY.'S DOCKET: SMITH 11
PRE-AMPLIFIER)
TECHNOLOGY CENTER 2000 MAIL ROOM
APR 17 2002 MAY 14 2002

INFORMATION DISCLOSURE STATEMENT [IDS]

Honorable Commissioner for Patents
Washington, D.C. 20231

RECEIVED

Sir :

MAY 09 2002

This Information Disclosure Statement is submitted in accordance with 37 CFR §§1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

1. This IDS should be considered, in accordance with 37 CFR §1.97, as it is filed before the mailing date of a first office action on the merits.

2. In accordance with 37 CFR §1.98, this IDS includes a list (e.g., Form PTO/SB/08A) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached.

3. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 and 68 in the preamble to the final rules; 1135 OG 13 at 20).

4. Other information being provided for the examiner's consideration follows:

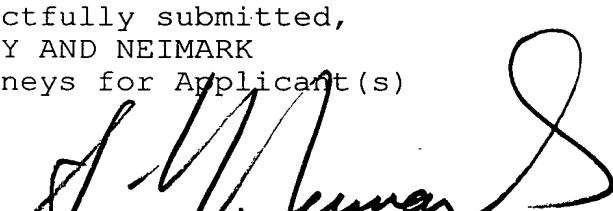
U.S. patent 6,107,876 describes a power amplifier and techniques used to amplify a signal. This is totally different from the "pre-amplifier" of the above-identified application which performs signal processing before any amplification is applied. Claim 1 of the above-identified application specifies that the output of the pre-amplifier precedes any power amplification.

WO 01/67448 describes a compact disc player and specifically mentions using a Digital signal Processor (DSP) device to perform the signal processing. These devices are limited for several reasons. The above-identified application describes the use of programmable logic devices, such as FPGAs, to implement the signal processing as they provide many advantages over DSP. For example, DSPs can only perform one instruction at a time. FPGAs allow a parallel hardware implementation. This is more efficient and gives better performance. This latter approach is certainly necessary for today's systems which are required to perform many complex surround sound, filtering, 3D and tonal algorithms for even larger multi-channel systems. The above-identified application's system is more versatile and can process data from a variety of inputs, e.g. MP3 over the Internet.

5. In accordance with 37 CFR §§1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant(s) reserves the right to prove that the date of publication is in fact different.

Respectfully submitted,
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